Organizational Interfaces

NASA Headquarters/ ESDIS

Establishes Fault Management Policy

System Monitoring & Coordination Center (SMC)

- **Policy Guidelines dissemination**
- **Fault history database**
- **System-wide Monitoring**

Fault Notifications, Recovery Coordination

External Interfaces (NSI, PSCN, etc)

Coordination

Disseminates Fault Policies

Fault Notifications, Recovery Coordination

Local Site Management/ Policy Makers

Local Fault Management Policy

DAACs

- **Fault Management**
  - **Help Desk/Ops Mgmt - Discrepancy Report**
  - **Fault monitoring - isolation, identification**
  - **Fault diagnosis & analysis**
  - **Fault reporting**
  - **Fault recovery**
- **Fault Policy**
- **Fault Prevention**

Fault Notifications, Recovery Coordination

Requests/Discrepancy Reports

Users

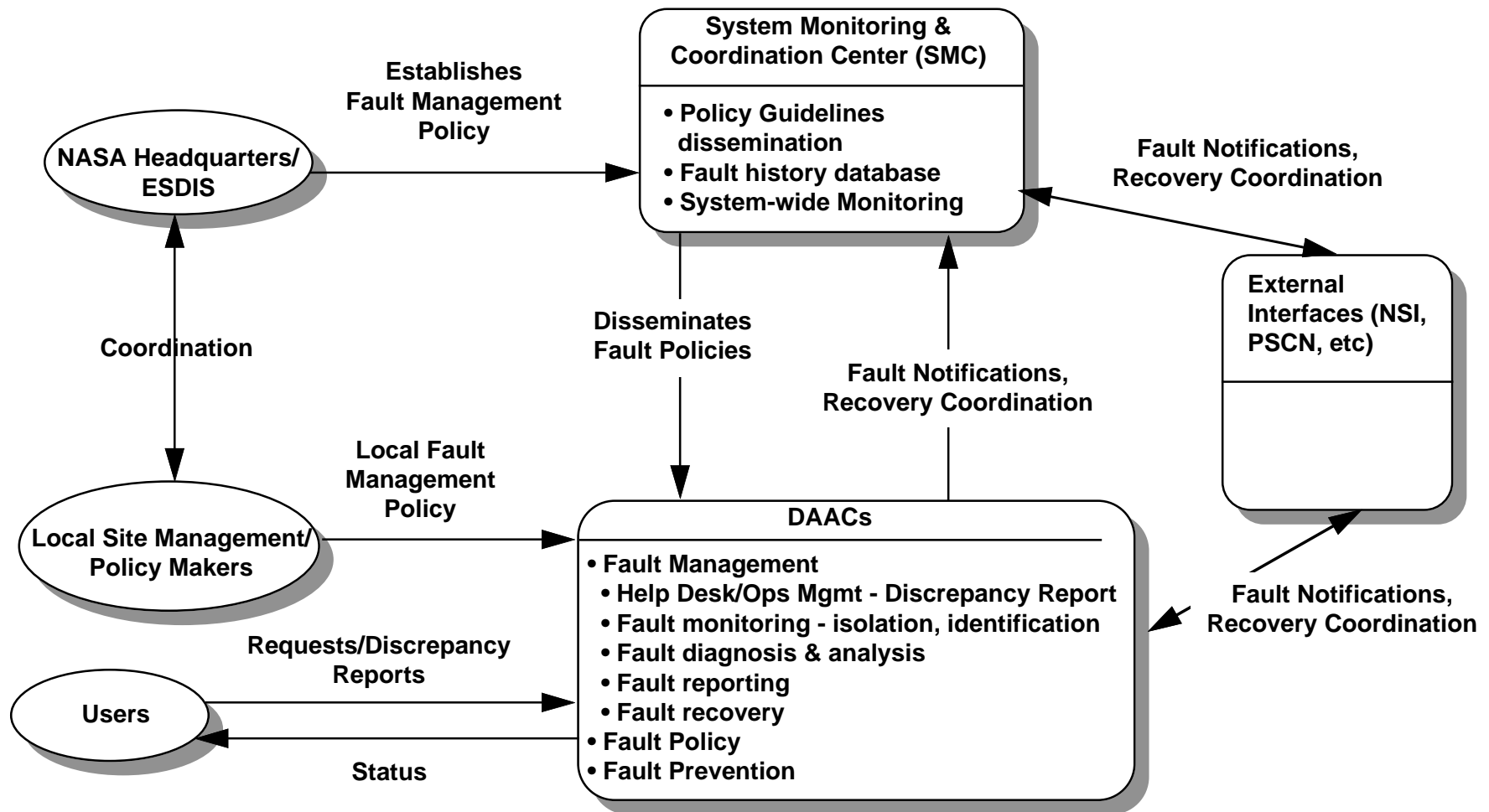**Status**

Roles

ESDIS Management

- **Establishes Fault Policies and Procedures**

SMC

- **Monitors and analyzes system fault trends**
- **Implements system fault Policies and Procedures**

Site Management

- **Adapt Site Fault Policies and Procedures**
- **Review Site Fault Trending**
- **Approve Fault Resolution**

Roles (cont.)

Site Operators/Engineers

- **Fault Analysis and Resolution**
- **Develop and Execute Fault Procedures**
- **Provide Fault Reporting**

User Services

- **Provide an interface for users to report problems**

Users

- **Report Faults**
- **Support Fault Analysis and Resolution**

Process

- **Establish and maintain:**
  - **Objectives/agreement**
  - **Standard operating procedures**

- **Set up FM system for monitoring - Customize to site unique needs (Authorizations are set up for roles. These may be reconfigured/ shared)**
  - **Create map hierarchies**
  - **Adapt categories and severity levels of faults**
  - **Establish thresholds**
  - **Adapt notification mechanisms**
  - **Adapt agents for detection and notification**

- **Detection**
  - **Notification received on the display about system-level faults**
  - **Fault information logged**
  - **Notification received from the user about error in applications**

Process (cont.)

- **Isolation and Diagnosis - Tools provided:**
    - **Log browser to browse log files for diagnostic information**
    - **Database provided for ad-hoc querying**
    - **Diagnostic tests provided to isolate and identify cause**
    - **Vendor diagnostics provided to diagnose failed equipment**
    - **Capability for problem logging & tracking (Trouble Ticketing)**

- **Recovery/Resolution**
    - **Object restored to operational state**

- **Documentation, Recording, Reporting & off-line mgmt. of fault**

Process (cont.)

Operation	Tools Available
Fault Detection	Management Agents, HP OpenView, Users (On-line electronic Incident Reporting Tool, e.g., Trouble Ticketing product or HTML-form based)
Fault Notification	Audible Notifications, Visual Notifications (Icons changing color, Pop-up notification windows)
Fault Isolation & Diagnosis	Log Browser, Database for ad-hoc querying Diagnostic Tests, Vendor Diagnostics
Fault Recovery	Standard Operating Procedures (SOP) On-line documentation Off-line resolutions
Documenting & Reporting	Database for ad-hoc querying, Problem tracking and logging (Trouble Ticketing)